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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/560,089	03/31/2006	Mats Jalk	10400C-00200/US	1200
30593	7590	09/04/2008	EXAMINER	
HARNESS, DICKEY & PIERCE, P.L.C.			KERNs, KEVIN P	
P.O. BOX 8910			ART UNIT	PAPER NUMBER
RESTON, VA 20195			1793	
MAIL DATE	DELIVERY MODE			
09/04/2008	PAPER			

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/560,089	JALK ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Kevin P. Kerns	1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 03 June 2008.  
 2a) This action is **FINAL**.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 30-48 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 30-48 is/are rejected.  
 7) Claim(s) 38 and 44 is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 09 December 2005 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)	5) <input type="checkbox"/> Notice of Informal Patent Application
Paper No(s)/Mail Date _____.	6) <input type="checkbox"/> Other: _____ .

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the labeling of text within all six of the rectangular boxes in Figure 3 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

In this instance, the abstract is not on a separate sheet (the abstract is only a minor portion of the front page of WO 2004/110676 A1) and includes "The invention (also) relates to", which are phrases that can be implied.

3. The disclosure is objected to because of the following informalities: on page 4, 13<sup>th</sup> line, replace "manoeuvring" with "maneuvering". On page 6, 35<sup>th</sup> and 36<sup>th</sup> lines, replace "fix" with "fixed" before "relation". On page 11, 14<sup>th</sup> line, replace "siding" with "sliding". Corrections and/or clarifications are required.

***Claim Objections***

4. Claims 38 and 44 are objected to because of the following informalities: in claim 38, last line, replace "measure" with "measured" before "teeming". In claim 44, 4<sup>th</sup> line, insert "of" after "flow". Appropriate correction is required.

***Double Patenting***

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 30-48 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-27 of copending Application No. 10/560,600 (also see equivalent US 2006/0266796). Although the conflicting claims are not identical, they are not patentably distinct from each other because the respective methods and devices for detecting the presence of slag in a shroud for guiding a molten metal from a ladle to a tundish share at least the following steps/features: providing a forked coil holder having at least two electrically isolated branches; mounting at least one transmitting (toroid) coil to a first branch and at least one receiving (toroid) coil to a second branch of the forked coil holder, each adapted to surround the shroud; placing the forked coil holder in such manner that an

imagined straight line drawn between the transmitting coil and the receiving coil crosses the shroud; generating, by said at least one transmitting coil, an electromagnetic field that enters the shroud and its contents; generating an induced voltage by the at least one receiving coil which is subjected to the electromagnetic field having entered the shroud and its contents, wherein the induced voltage is indicative of the presence or absence of slag in the contents; mounting the forked coil holder to a shroud manipulator that keeps the coils fixed relative to the shroud; detecting turbulent flow inside the shroud and changing the electromagnetic field frequency if detected; measuring ladle weight decrease and teeming rate in the tundish; and cooling the transmitting and receiving coils, such that a casting plant that includes the ladle, tundish, shroud, and claimed device is provided. Although independent claims 30 and 40 of the present application do not include some of the additional process steps and structural features set forth in independent claims 1 and 15 of copending Application No. 10/560,600, it would have been obvious to one of ordinary skill in the art to exclude these additional steps/features, as open-ended "comprising" language exists in the present application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 36-38 and 40-48 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 36 recites the limitation "the sliding gate opening information". There is insufficient antecedent basis for this limitation in the claim. In this instance, it is suggested to replace "the" with "a" to obtain proper antecedent basis.

Claims 37 and 45 recite the limitation "the ladle content". There is insufficient antecedent basis for this limitation in the claims. In this instance, it is suggested to replace "the" with "a" to obtain proper antecedent basis.

Claim 38 recites the limitation "the teeming rate". There is insufficient antecedent basis for this limitation in the claim. In this instance, it is suggested to replace "the" with "a" to obtain proper antecedent basis.

Claim 40 recites the limitation "the channel". There is insufficient antecedent basis for this limitation in the claim. In this instance, it is believed that the term "channel" should be replaced with "shroud" to obtain proper antecedent basis.

### ***Allowable Subject Matter***

9. Claims 30-48 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph (in addition to the double patenting rejections), set forth in this Office action.

***Response to Arguments***

10. The examiner acknowledges the applicants' amendment received by the USPTO on June 3, 2008. The amendments overcome all prior 35 USC 103(a) rejections. However, new objections to the drawings, abstract, specification, and claims, as well as new double patenting and 35 USC 112, 2<sup>nd</sup> paragraph rejections, are presented in above sections 1-8. The applicants have cancelled claims 1-29, and have added new claims 30-48, such that claims 30-48 are currently under consideration.

11. Applicants' arguments with respect to claims 30-48 have been considered but are moot in view of the new ground(s) of rejection (under double patenting and/or 35 USC 112, 2<sup>nd</sup> paragraph).

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Kevin P. Kerns whose telephone number is (571)272-1178. The examiner can normally be reached on Monday-Friday from 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jessica Ward can be reached on (571) 272-1223. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Primary Examiner  
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August 15, 2008